

# ANNUAL REVIEW OF FISH DISEASES

Volume 2

1992

## CONTENTS

### v Dedication

**M. Faisal**  
**F.M. Hetrick**

### 1 Preface

### Articles

**K. Söderhäll** 3 Crustacean Immunity  
**L. Cerenius**

**L.A. Ford** 25 Host Defense Mechanisms of Cephalopods  
**E.C. McKinney** 43 Shark Lymphocytes: Primitive Antigen Reactive Cells  
**C.J. Secombes** 53 The Role of Phagocytes in the Protective Mechanisms  
**T.C Fletcher** of Fish

**A.N. Vallejo** 73 Antigen Processing and Presentation in Teleost  
**N.W. Miller** Immune Responses  
**L.W. Clem**

**R.E. Wolke** 91 Piscine Macrophage Aggregates: A Review  
**D.L. Evans** 109 Nonspecific Cytotoxic Cells as Effectors of Immunity  
**L. Jaso-Friedmann** in Fish

**A.J. Ainsworth** 123 Fish Granulocytes: Morphology, Distribution, and  
Function

**Y. Suzuki** 149 Fish Granulocytes in the Process of Inflammation  
**T. Iida**

**S.L. Kaattari** 161 Fish B Lymphocytes: Defining their Form and  
Function

**S. Chilmonczyk** 181 The Thymus in Fish: Development and Possible  
Function in the Immune Response

**M.R. Wilson** 201 Fish Immunoglobulins and the Genes that Encode  
**G.W. Warr** them

**D.K. Sakai** 223 Repertoire of Complement in Immunological Defense  
Mechanisms of Fish

*Continued next page*

INDEXED IN Environmental Periodicals Bibliography, CAB International

ISSN 0959-8030  
(963)

**J.B. Alexander** 249 Noncellular Nonspecific Defence Mechanisms of Fish  
**G.A. Ingram**

**D.P. Anderson** 281 Immunostimulants, Adjuvants, and Vaccine Carriers in Fish: Applications to Aquaculture

**V.S. Blazer** 309 Nutrition and Disease Resistance in Fish

**P. Klesius** 325 Immune System of Channel Catfish: An Overture on Immunity to *Edwardsiella ictaluri*

**P.T.K. Woo** 339 Immunological Responses of Fish to Parasitic Organisms

**M. El-Matbouli** 367 Present Knowledge of the Life Cycle, Taxonomy, Pathology, and Therapy of some *Myxosporea* spp.  
**T. Fischer-Scherl**  
**R.W. Hoffmann** Important for Freshwater Fish

**Book Review**

**M. Faisal** 403 *The Immune System: Comparative Histophysiology*  
by Agustin G. Zapata and Edwin L. Cooper

I Author and Keyword Index  
Volume 2, 1992



1F